The well-known proverb “may you live in interesting times” is considered by many to be a blessing, yet others believe it is actually an ancient curse. People’s interpretation tends to correspond with their own appetite for change, as well as their comfort (or lack of) in the face of ambiguity. Regardless of the adage’s origin and intent, many would agree that these are interesting times for healthcare. In fact, at HIMSS we believe healthcare is currently undergoing a period of reformation on a scope and scale that is unmatched.

A perfect storm of factors – including the shift toward value-based care, rising costs, health system consolidation, the approaching silver tsunami, regulatory pressures, increased consumerization, major technology players entering the market and the ever-expanding potential of digital health tools – are coalescing and fundamentally disrupting business models. Traditional healthcare institutions are in reactive mode. Upstarts are finding that healthcare is not as easily disrupted as industries like retail. For nearly everyone, there are more questions than answers.

At HIMSS, we believe it is our responsibility to help the industry make sense of these changes and tap into the promise and potential of information and technology. With that premise, we are introducing an annual forecast report. Bringing together insights from leadership across HIMSS and our subsidiaries, we’re aiming to shine a light around the corner and help illuminate the path to clinical and financial health.

Read on for our predictions for the industry in 2019.

“Consumer pressure is driving a disruptive technology-enabled shift in healthcare today. Digital health technologies are beginning to deliver on their promise to help providers understand individual consumer preferences and provide personalized care that effectively coordinates care throughout the broader health ecosystem. By fully realizing the potential of information and technology, we can create an ever increasingly informed and empowered global community of innovators, care providers and patients.”

– Hal Wolf, HIMSS President & CEO
Digital health tools have been riding the peak of the hype cycle for several years now, but 2019 will be the year that digital health innovators will be accountable for delivering tangible results. Consumer pressure and the policy/regulatory environment will be big drivers of greater accountability. Government barriers to digital health innovation will continue to drop as the [FDA Precertification (Pre-Cert) Pilot Program](https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/ApprovalPathways/PrecertificationProgram/ucm670056.htm) and [CMS Innovation Center](https://innovation.cms.gov/) open the door to innovation. At the same time, policymakers are going to be more aggressive about exploring policy changes that can speed up the time to market for tools that increase patient access, improve healthcare efficiencies, decrease provider burden and create new pathways for care delivery that don’t require hospital stays.

Against this backdrop, it will no longer be enough to bring to market the next bright, shiny gadget. Digital health tools will need to answer for the way technology will increase access to care and narrow gaps in care and coverage. There will be increased pressure to standardize systems for advanced interoperability to help improve the way information is shared and care is administered, and to do so more quickly than ever before. In 2019, new tools and technology will begin to move from the test to market phases more rapidly in order to meet ever-increasing consumer expectations and pressure from policymakers.

As the digital health industry matures and speed to market increases, we will see more specific real-world applications of digital health technology, such as:

- **Broader adoption of artificial intelligence (AI) and machine learning in population health to improve identification of those at risk and delivery of personalized (precision) treatments.**
- **Virtual reality/augmented reality (VR/AR) as a routine treatment for pain control after surgery and as an adjunct for chronic pain control.**
- **Wearables and implantable health devices to enable more routine detection of chronic conditions and monitor treatment effectiveness.**
- **Increased use and impact of digital therapeutics as both an adjunct (e.g., to enhance medication adherence) and as an alternative to traditional treatments, such as diabetes prevention programs and other models related to preventing or mitigating the impact of chronic conditions.**
- **Broader use of voice recognition and intelligent assistants to reduce clinician burden.**

Finally, after much speculation and hype, 2019 will be the year that blockchain’s potential as an interoperability aid comes into sharper focus. [Blockchain/distributed ledger technology (DLT)](https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/ApprovalPathways/PrecertificationProgram/ucm670056.htm) is going to be leveraged as a part of the broader interoperability ‘toolbox’ to remove the redundancy and friction points that currently exist within the system (i.e. claims adjudication, benefit fulfillment, provider credentialing, etc.). DLT is not a ‘magic bullet;’ it’s essentially middleware that was designed to be extremely transparent, but will be utilized to start conversations and explore new business opportunities with stakeholders who have not been able to ‘talk’ to each other due to misaligned incentives and technological infrastructure.
In 2019, external market disruptors entering the healthcare space – companies like Amazon, Google and Walmart – will continue to apply their understanding of consumer expectations and machine learning tools to meet and exceed customer demands in ways that the traditional healthcare market still struggles with. Though these companies have a sophisticated understanding of buyers’ needs and expectations, they come lacking a real understanding of the depth and complexity of healthcare delivery. At the same time, consumers will increasingly demand greater access to personalized and patient-centered care, as they shift their attention to those offering convenience, choice and, most importantly, cost transparency.

Healthcare systems are not known for their agility, and are challenged to develop solutions that attract and keep healthcare consumers, as well as offer exceptional consumer experiences that are as easy to navigate as online banking and retail interactions. Unless they move to rapidly evolve and change to keep pace with the new disruptors entering the marketplace, healthcare systems will find themselves falling short in the race to attract a new marketplace of consumers unwilling to wait for the care experience they’ve come to expect.

As organizations adapt to these consumer pressures, healthcare will continue to shift toward a value-based model with increased emphasis on patient-centric care. This evolution will manifest across a few specific areas:

- Providers will see additional influence from employers (think: Amazon/JP Morgan/Berkshire Hathaway) as these organizations seek to manage costs across the healthcare value chain.
- Efforts to integrate the various healthcare solutions to support value-based health will continue, and increased emphasis will be put on investing in infrastructure to support these initiatives (e.g., telehealth, precision medicine and other consumer-oriented tech) in a secure, scalable manner.
- The increased adoption of clinically-integrated supply chain capabilities will help organizations to improve financial and clinical outcomes through a deeper understanding of consumption patterns, as well as downstream traceability and trackability of clinical impact.
- Specialized, high-touch, tech-enabled, value driven primary care practices for Medicare and Medicaid populations had a big year in 2018, including Iora Health, Oak Street, VillageMD and the launch of Devoted Health. The industry could begin to see acquisition activity or consolidation of these models in 2019.
- Genomic diagnostics companies like veteran player 23andMe raised large rounds of funding this year, as well as Helix with its “App Store” approach to genomics, Nebula Genomics and its blockchain platform, and GRAIL, which could have an imminent IPO. After more than a decade of trying to move DNA sequencing technologies out of expensive, expert-controlled environments, in 2019 we expect to see uptake go mainstream and increasingly direct to consumer.
Financial pressures on care providers will continue to increase as organizations are expected to do more with fewer resources and reduce costs while providing higher quality and safer care. The silver tsunami will continue to exacerbate these pressures, as 11,000 people per day in the U.S. reach 65 years of age. This increasing volume of patients, many with complex health issues, will compound with loud consumer demands for transparency into how increased healthcare spend translates to high quality, efficient and accessible care. To meet these demands, health systems, payers and providers will be forced to advance value-based healthcare delivery in ways that keeps costs low both for the industry and the consumer. We’ll see an effort to achieve this, in part, via a greater push into value-based arrangements through growth in Managed Medicaid and Medicare Advantage.

Further, demographic challenges will drive an evolution of care delivery as the industry navigates health disparities of patients living in lower income regions – both rural and urban – without readily available access to care. As a result, we can expect to see:

- New digital health tools and technology used to bridge the geographic divide and provide 24/7 access to care no matter the location.
- Population and public health analytics used more frequently to identify vulnerable patient groups and create solutions to key social determinants of health, such as genetics, location, gender, income, occupation, etc.
- Robust tools and technology to extend care outside hospital walls by leveraging virtual care, telehealth, electronic medical records, smart technology and automated clinical decision support powered by artificial intelligence.

In 2018 it became clear traditional healthcare alone won’t bend the cost curve, and social determinants of health must be at the forefront of care. In 2019, companies focusing on the social determinants of health and how to integrate mechanisms for providers to play a bigger role in triage, data-driven care, continuity of care and personalized action plans will find a more receptive environment. This environment could also drive reform on payment models to enable all stakeholders to reorganize themselves to treat the whole person, while new applications of health information and technology will improve care delivery, break down information silos and improve the state of health and wellness for every human, everywhere.
Policymakers focusing on health information and technology will be focusing on potential policy changes with motivation from two areas: privacy and security. Cybersecurity will be a priority for healthcare policymakers as bad actors continue identifying healthcare as a target-rich environment to create uncertainty and/or make money. Healthcare organizations the world over are struggling to provide the right information about the right patient to the right provider in a secure and timely manner because of the actions of bad actors – and they’re looking to policymakers to help them. In 2019, policymakers will look to the private sector and their policy counterparts in other countries to figure out what policy changes need to be put into place to protect information sharing.

Consumer privacy will also gain attention in 2019. As companies adjust to privacy changes in response to the General Data Protection Regulation (GDPR), consumers and policymakers will be more aware of the varying levels of data privacy protections and policies. At some point in the near future, consumers in the U.S. are going to ask, “Why can’t we do this here?” This question will challenge many business models, especially what Shoshana Zuboff, author and retired Charles Edward Wilson professor of business administration at the Harvard Business School, calls “surveillance capitalism.” Healthcare will be pulled into the discussion and analysis as policymakers begin to explore what policy changes need to occur to increase consumer protection and confidence in healthcare data transmission security. For example, in the U.S., the Trump Administration is expected to request public feedback on ways to modernize the Health Insurance Portability and Accountability Act (HIPAA). Congress and the state houses will likely begin analyses in 2019.

We believe digital and connected health technologies will continue their march toward widespread use in 2019, displacing traditional care models. Early challenges have taught digital developers that health happens at the intersection of the healthcare system, the workflow of the provider and the life circumstances of the patient.

Digital health developers are beginning to integrate these critical contextual factors into the way they design tools and services for health data exchange, integration into electronic health records (EHRs), improved user interfaces and flexible behavioral response. Healthcare providers are seeking ways to best integrate emerging technologies, such as artificial intelligence, virtual reality and digital therapeutics, as a way to extend quality care to their patients where they are, when they need it. And, consumers are placing higher demands on their providers to deliver always-on access to care. We implore all stakeholders throughout the healthcare ecosystem to take this holistic approach to development in 2019.

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